

Remarks:

Reconsideration of the application is respectfully requested.

Applicants would like to thank Examiner Knoll for the courtesy shown to Applicants' representative during the telephonic interview of March 18, 2005, in which the finality of the present Office Action was withdrawn.

Claims 1 - 5, 7 - 28, 30 - 46, 93 and 94 are presently pending in the application. No claims have been amended or canceled.

In item 1 of the above-identified Office Action, claims 1 - 5, 7 - 28, 30 - 46 and 93 - 94 were rejected as allegedly being indefinite under 35 U.S.C. § 112, first paragraph. Applicant respectfully disagrees. The instant specification does, indeed, provide adequate support for the limitations pointed to in item 1 of the Office Action.

More particularly, the instant application acknowledges that there were devices already known in the art for transmitting data packets on a bus. The DENG reference cited in the Office Action discloses one device known in the art at the time of the instant application for forming data packets. What is novel in the instant application, is the information transmitted in the data packets. This is supported on page

Applic. No. 09/883,817
Response Dated April 21, 2005
Responsive to Office Action of January 21, 2005

16, lines 1 - 11 of the original specification (page 19 - page 20 of the substitute specification), which states:

"The aforesaid units in which the data to be transmitted is transmitted together with information that is required or useful for the transmission and/or the use of the data and/or further information, are, for example, the frames or messages which are known from already existing bus systems. However, the frames or messages which are used in the method in question here have a structure different from conventional frames or messages.

An example of the structure of a frame or a message which is used in the method in question here is illustrated in Fig. 2." [emphasis added by Applicants]

The units of the instant invention, but not the device of forming them, are further differentiated from the frames or messages which are known from already existing bus systems, as described in the original specification, page 17, lines 15 - 21 (substitute specification page 21), which states:

"The reply field REPLY is not filled with data, or at any rate only partially with data, by the device sending the frame or the message. This field thus defines a time slot in which the devices which are not bus master can, or must, output data onto the bus. Depending on the length of the time slot defined by the reply field, one or more bits can be transmitted via the bus in that time slot." [emphasis added by Applicants]

However, other information than time slot information can be sent in the REPLY field. For example, page 21 of the substitute specification, line 23 - page 22, line 18 (page 18

Applic. No. 09/883,817

Response Dated April 21, 2005

Responsive to Office Action of January 21, 2005

of the original specification, lines 1 - 22, absent one amendment) states:

"The information which is transmitted via the bus in the time slot defined by the reply field can be a very wide range of information, for example

the signaling from one or more devices connected to the bus that said device or devices has/have received in a fault-free condition the frame or the message of which the reply field is a component (or possibly also a previously transmitted frame or a previously transmitted message or data contained in it), and/or

the signaling from one or more devices connected to the bus that said device or devices has/had not received in a fault-free condition the frame or the message of which the reply field is a component (or possibly also a previously transmitted frame or a previously transmitted message or data contained in it), and/or

information from one or more of the devices connected to the bus relating to their states (for example relating to the operating mode in which they are in, the utility factor, the temperature etc)." [emphasis added by Applicants]

The instant application goes on to further define the formulation of the reply field on page 20 of the original specification, lines 21 - 26 (page 24 - 25 of the substitute specification), which states:

"The length of the reply field (the length of the time slot defined thereby) is not subject to any restrictions and is preferably variable; it is expediently in each case precisely as long as is necessary to be able to transmit via the bus the information which is required or desired at this point in time."

Applic. No. 09/883,817
Response Dated April 21, 2005
Responsive to Office Action of January 21, 2005

As such, to summarize, the instant application clearly discloses: (1) units formed by the same means as, for example, the frames or messages formed by already existing bus systems; (2) the units of the instant invention having a structure different from conventional frames or messages; (3) an example of the structure of a frame or a message which is used in the method in question here being illustrated in Fig. 2, which shows the message including a REPLY segment; (4) Applicants' specification specifically states that "the reply field REPLY is not filled with data, or at any rate only partially with data, by the device sending the frame or the message"; and (5) the device sending the frame does not fill the REPLY field with data so that the devices which are not bus master can, or must, output data onto the bus, during the remainder of the time slot. Note that Applicants' claimed reply field or time slot is only partially filled with data by the device sending the frame, to permit devices which are not the bus master to transmit during the remaining length/time of the frame. Thus the reply frame sets the boundaries within which a non-bus master device has the opportunity to transmit its information (i.e., during the remainder of the reply field not used by the device sending the frame). This is clearly set forth from the above quoted portions of the specification. It is accordingly believed that the specification and the claims meet the requirements of 35 U.S.C. § 112, first paragraph, and

Applic. No. 09/883,817
Response Dated April 21, 2005
Responsive to Office Action of January 21, 2005

adequately describe how units are formed "partly with at least one region defining a given time slot".

Further, with regard to the allegation on page 3 of the Office Action that "there is no disclosure as to how to make or use the selective outputting or the setting of information without undue experimentation", Applicants respectfully disagree. As quoted above, from page 21 of the substitute specification, line 23 - page 22, line 18 (page 18 of the original specification, lines 1 - 22, there are given three particular examples in which a device outputs information and/or data within the time slot. As reprinted from above, page 21 of the substitute specification, line 23 - page 22, line 18 (page 18 of the original specification, lines 1 - 22, absent one amendment) states:

"The information which is transmitted via the bus in the time slot defined by the reply field can be a very wide range of information, for example

the signaling from one or more devices connected to the bus that said device or devices has/have received in a fault-free condition the frame or the message of which the reply field is a component (or possibly also a previously transmitted frame or a previously transmitted message or data contained in it), and/or

the signaling from one or more devices connected to the bus that said device or devices has/had not received in a fault-free condition the frame or the message of which the reply field is a component (or possibly also a previously transmitted frame or a previously transmitted message or data contained in it), and/or

Applic. No. 09/883,817

Response Dated April 21, 2005

Responsive to Office Action of January 21, 2005

information from one or more of the devices connected to the bus relating to their states (for example relating to the operating mode in which they are in, the utility factor, the temperature etc)." [emphasis added by Applicants]

As such, it can be seen from these three examples, that the "selective outputting" occurs when: (1) said device or devices has/have received in a fault-free condition the frame or the message of which the reply field is a component; (2) that said device or devices has/had not received in a fault-free condition the frame or the message of which the reply field is a component; and/or (3) information from one or more of the devices connected to the bus relating to their states is needed.

In the Office Action, on page 9, it is stated that:

"Applicant further argues that the description of the REPLY field in the specification provides adequate disclosure of the means by which units are formed (p. 23); Examiner assumes Applicant is referring to disclosure on pages 21 - 22, which describe examples of a "very wide range of information" (p. 21) and proceeds to list three categories; however the disclosure fails to enable the selecting of this information." [emphasis added by Applicants]

Applicant respectfully disagrees. The examples, clearly enable the present invention. It is absolutely explicit from the examples that the above information would be selected and transmitted when the device has something to report (i.e., when a message is received fault-free or not fault-free, examples 1 and 2, respectively) and when the device is supposed to report

Applic. No. 09/883,817
Response Dated April 21, 2005
Responsive to Office Action of January 21, 2005

it. Page 18 of the original specification, line 24 -page 19,
line 17 (pages 22 - 23 of the substitute specification),
clarifies the use of settings to inform the devices to output
the data/information during the time interval, as follows:

"Settings which determine which device has to output
which information onto the bus at which point in time
are preferably made in the respective devices
themselves. As a result, the respective devices can
output onto the bus independently, i.e. without
triggering or authorization by the device controlling
the bus allocation or by some other device, the data to
be output by them onto the bus, and can do this at the
correct time.

The corresponding settings in the devices connected to
the bus are expediently made before the start of the
transmission of the frame or message which contains the
reply field, preferably at the time of initialization
of the system which takes place for example after said
system is switched on. It proves advantageous if the
settings can be varied during operation. This could be
brought about, for example, by means of control
instruction sent in appropriate frames or messages.
The execution of the setting by means of frames or
messages sent via the bus can be used not only when
changing the settings but also when making new settings
of the devices." [emphasis added by Applicants]

Remember, page 20 of the original specification, lines 21 - 26
(page 24 - 25 of the substitute specification), which states:

"The length of the reply field (the length of the time
slot defined thereby) is not subject to any
restrictions and is preferably variable; it is
expediently in each case precisely as long as is
necessary to be able to transmit via the bus the
information which is required or desired at this point
in time."

Applic. No. 09/883,817
Response Dated April 21, 2005
Responsive to Office Action of January 21, 2005

As such, at system initialization, the settings that determine when and at what time the devices are to respond during the "time slot" are preset in each device. The devices then can all respond, it each device so determines, as the length of the reply field is set as the in each case precisely as long as is necessary to be able to transmit via the bus the information which is required or desired at this point in time.

The use of **settings** to determine the order of reporting of the devices is further enabled, on page 20 of the original specification, lines 12 - 19 (page 24 of the substitute specification), which states:

"The settings are made in the example in question in such a way that the content of the current frame or of a specific preceding frame or the content of the current message or of a specific preceding message, in particular the receivers of the frame or message which is specified in it is made to determine which device has to output which information onto the bus at which point in time. There is thus a frame-specific or message-specific use of the reply field. [emphasis added by Applicants']

Thus, Applicants' specification affirmatively teaches that the settings used to specify which devices are to report, and when, can be sent in the reply field of the very frame or message, itself (i.e. "in particular the receivers of the frame or message which is specified in it").

Applic. No. 09/883,817

Response Dated April 21, 2005

Responsive to Office Action of January 21, 2005

As such, Applicants specification absolutely enables the output of the appropriate signal during the appropriate time slot, by each device which make a determination and, selectively outputs the data or information in accordance with settings programmed in each device at system initialization, or as informed in the reply field of a message.

It is accordingly believed that the specification and the claims meet the requirements of 35 U.S.C. § 112, first paragraph.

In item 2 of the above-identified Office Action, claims 1 - 5, 8 - 28, 31 - 46 and 93 - 94 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U. S. Patent No. 6,347,097 to Deng ("DENG").

In item 3 of the above-identified Office Action, claims 7 and 30 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over DENG in view of U. S. Patent No. 6,212,633 to Levy et al ("LEVY").

Applicants respectfully traverse the above rejections.

Applic. No. 09/883,817

Response Dated April 21, 2005

Responsive to Office Action of January 21, 2005

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Independent claims 1 recites, among other limitations:

"transmitting, in units, data and information, concerning at least one of a transmission of the data and a use of the data, from a first device to one or more second devices to which the data does not concern, and one or more third devices to which the data does concern;

forming the units at least partly with at least one region defining a given time slot within which the second and third devices can output onto the bus specific information and/or data;" [emphasis added by Applicants]

Independent claim 24 recites similar limitations, among others. Applicants have already said a very lot hereabove, about "forming the units". However, note that claims 1 and 24 recite, among other limitations, that the at least one region defining a given time slot within which the second device [to which the data does not concern (cl. 1) or is not intended (cl. 24)] and the third device [to which the data does concern (cl. 1) or is intended (cl. 24)] can output data.

More particularly, on page 27 of the substitute specification, line 1 - page 28, line 2, Applicants' specification teaches:

It will firstly be assumed that the device sending the frame or the message requires information indicating whether the respective frame or the respective message has been received by the receiver in a fault-free condition. This can be brought about by virtue of the fact that

Applic. No. 09/683,817

Response Dated April 21, 2005

Responsive to Office Action of January 21, 2005

the device for which the respective frame or the respective message is intended is set in such a way that it outputs, within the time slot defined by the reply field or at a specific point in time within the time slot defined by the reply field, a positive acknowledge bit formed by a dominant bit in the example in question onto the bus if up to then it has received the frame or the message in a fault-free condition, and it does not output a positive acknowledge bit (no dominant bit) if the opposite is the case, and

the devices for which the respective frame or the respective message is not intended are set in such a way that, at least at the point in time at which the device for which the respective frame or the respective message is intended, they have to acknowledge the fault-free reception of the frame or of the message by outputting a positive acknowledge bit, do not output any data onto the bus or any information indicating whether or not they have received the frame or the message in a fault-free condition up to then." [emphasis added by Applicants]

As such, in Applicants' claimed system, both the devices intended to receive the message and the devices not intended to receive the message, must output an acknowledgement bit if they received the data fault-free, albeit, at different times during the reply period.

The DENG reference discloses neither teaches, nor suggests, that receivers downstream of the sender that are not intended to receive the message output an acknowledgement of data received fault-free, as well as receivers downstream of the sender that are intended to receive the message. Nor does the Office Action, seem to address this failure of DENG. It is merely stated, in relevant part, on page 4 of the Office Action:

Applic. No. 09/883,817

Response Dated April 21, 2005

Responsive to Office Action of January 21, 2005

"Regarding claims 1 and 24, Deng discloses transmitting in units data from a first device to one or more second devices together with information (e.g., col. 6, lines 34 - 40); . . ."

The Office Action does not point to anywhere in DENG where it is either taught, or suggested, that Applicants' second class of devices, devices not intended to receive the message, also, output onto the bus specific information and/or data, in response to a message not intended for it. Applicants' believe that it is not pointed out in the Office Action, because DENG fails to teach or suggest that devices not intended to receive the message transmit an "acknowledgement". In fact, DENG intimates that only a single receiver will send an acknowledgement. See, col. 6 of DENG, lines 45 - 49, which states:

"This 'ack-gap' is of varying lengths depending upon where the receiver is on the bus with respect to the senders of the link request and acknowledgment (ack)."
[emphasis added by Applicants]

As such, Applicants' believe, among other things, that the DENG reference fails to teach or suggest, two classes of devices, those for whom the message is intended/concerns, and those for whom the message is not intended/doesn't concern, that can output an acknowledgement in the "time slot".

Applic. No. 09/883,817
Response Dated April 21, 2005
Responsive to Office Action of January 21, 2005

Additionally, Applicants' independent claims 93 recites, among other limitations:

"defining, in the second and third devices enabled for outputting data within the given time slot, variable settings of the given time slot selected from the group consisting of a setting to determine under which conditions information and/or data are to be output within the given time slot, a setting to determine which information and/or data are to be output within the given time slot, and a setting to determine at which points in time within the given time slot the information and/or data are to be output."

and 94 recites, among other limitations:

"defining, in the first device, variable settings of the given time slot selected from the group consisting of a setting to determine which other devices have to output information and/or data within the given time slot, a setting to determine which information and/or data are to be output within the given time slot by the other devices, and a setting to determine at which points in time within the given time slot the other device have to output the respective information and/or data." [emphasis added by Applicants]

In the Response to the previous Office Action, Applicants set forth how the DENG reference neither taught, nor suggested, Applicants' particularly claimed defining steps of claims 93 and 94. More particularly, the defining steps of claims 93 and 94, define the given time slot based on certain conditions not present, taught or suggested in DENG. Applicants' claims 93 and 94, define the varying time slot based on the necessity of receiving data back possibly from a plurality of devices. As stated above, col. 6 of DENG, lines 45 - 49, merely states:

Applic. No. 09/883,817

Response Dated April 21, 2005

Responsive to Office Action of January 21, 2005

"This 'ack-gap' is of varying lengths depending upon where the receiver is on the bus with respect to the senders of the link request and acknowledgment (ack)."
[emphasis added by Applicants]

DENG only discloses varying the 'ack-gap' length based on where the receiver is on the bus relative to the sender of the link request. DENG does not teach or suggest varying the length of the time slot to accommodate responses/acknowledgements possibly from a plurality of devices. In response to Applicants' arguments in the previous Response, on page 10 of the present Office Action, it was stated:

"Applicant further argues that 'Deng does not show 'defining . . . variable settings'' and distinguishes his invention as 'allow[ing] for second and third devices on the bus to output 'data within the given time slot'' (p. 28); however, the distinction of 'variable' fails to distinguish the respond field of Deng, or for that matter, any response, which, if meaningful, necessarily comprises variable settings."

The Office Action fails to address the particularly claimed factors in claims 93 and 94, upon which Applicants' variable settings are defined. As noted above, those factors include taking into account conditions and/or information and/or data from multiple responding receivers, which DENG doesn't do. DENG sets the 'ack-gap' length based on the distance between a receiver and a link sender. As such, Applicants' believe that

Applic. No. 09/883,817

Response Dated April 21, 2005

Responsive to Office Action of January 21, 2005

the DENG reference fails to teach or suggest Applicants' claimed invention of claims 93 and 94.

Applicants additionally believe that the LEVY reference, fails to teach or suggest the above described elements of Applicants' independent claims missing from the DENG reference, among others.

It is accordingly believed that none of the references, whether taken alone or in any combination, teach or suggest the features of claims 1, 24, 93 and 94. Claims 1, 24, 93 and 94 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 1 or 24. As it is believed that the claims were patentable over the cited art in their original form, the claims have not been amended to overcome the references.

In view of the foregoing, reconsideration and allowance of claims 1 - 5, 7 - 28, 30 - 46, 93 and 94 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

Applic. No. 09/883,817

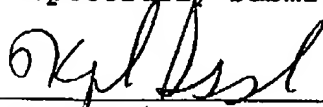
Response Dated April 21, 2005

Responsive to Office Action of January 21, 2005

If an extension of time for this paper is required, petition
for extension is herewith made.

Please charge any fees that might be due with respect to
Sections 1.16 and 1.17 to the Deposit Account of Lerner and
Greenberg, P.A., No. 12-1099.

Respectfully submitted,



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